Vertical Displays

This document describes how you can combine the features of the statements DISPLAY and WRITE to produce vertical displays of field values.

The following topics are covered:

- Creating Vertical Displays
- Combining DISPLAY and WRITE
- Tab Notation - T*-field
- Positioning Notation x/y
- DISPLAY VERT Statement
- Tab Notation - P*-field
- Further Example of DISPLAY VERT with WRITE Statement

Creating Vertical Displays

There are two ways of creating vertical displays:

- You can use a combination of the statements DISPLAY and WRITE.
- You can use the VERT option of the DISPLAY statement.

Combining DISPLAY and WRITE

As described in Statements DISPLAY and WRITE, the DISPLAY statement normally presents the data in columns with default headers, while the WRITE statement presents data horizontally without headers.

You can combine the features of the two statements to produce vertical displays of field values.

The DISPLAY statement produces the values of different fields for the same record across the page with a column for each field. The field values for each record are displayed below the values for the previous record.

By using a WRITE statement after a DISPLAY statement, you can insert textand/or field values specified in the WRITE statement between records displayed via the DISPLAY statement.

The following program illustrates the combination of DISPLAY and WRITE:

```
** Example Program 'WRITEX04'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 JOB-TITLE
  2 CITY
  2 DEPT
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'SAN FRANCISCO'
  DISPLAY NAME JOB-TITLE
  WRITE 20T 'DEPT:' DEPT
  SKIP 1
END-READ
END
```

It produces the following output:

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```
Page      1                                                  97-08-19  17:52:19

        NAME                  CURRENT
                             POSITION
-------------------- ------------------------

KOLENCE                MANAGER
                     DEPT: TECH05

GOSDEN                 ANALYST
                     DEPT: TECH10

WALLACE                SALES PERSON
                     DEPT: SALE20
```

Tab Notation - T**field*

In the previous example, the position of the field DEPT is determined by the tab notation *n***T** (in this case "20T", which means that the display begins in column 20 on the screen).

Field values specified in a WRITE statement can be lined up automatically with field values specified in the first DISPLAY statement of the program by using the tab notation **T***field* (where *field* is the name of the field to which the field is to be aligned).

In the following program, the output produced by the WRITE statement is aligned to the field JOB-TITLE by using the notation "T*JOB-TITLE":

```
** Example Program 'WRITEX05'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 JOB-TITLE
  2 DEPT
  2 CITY
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'SAN FRANCISCO'
  DISPLAY NAME JOB-TITLE
  WRITE T*JOB-TITLE 'DEPT:' DEPT
  SKIP 1
END-READ
END
```

```
Page      1                                                  97-08-19  17:52:19

        NAME                  CURRENT
                             POSITION
-------------------- ------------------------

KOLENCE                MANAGER
                       DEPT: TECH05

GOSDEN                 ANALYST
                       DEPT: TECH10

WALLACE                SALES PERSON
                       DEPT: SALE20
```

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Positioning Notation *x/y*

When you use the DISPLAY and WRITE statements in sequence and multiple lines are to be produced by the WRITE statement, you can use the notation *x/y* (number-slash-number) to determine in which row/column something is to be displayed. The positioning notation causes the next element in the DISPLAY or WRITE statement to be placed **x** lines below the last output, beginning in column *y* of the output.

The following program illustrates the use of this notation:

```
** Example Program 'WRITEX06'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 FIRST-NAME
  2 MIDDLE-I
  2 ADDRESS-LINE (1:1)
  2 CITY
  2 ZIP
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'NEW YORK'
  DISPLAY 'NAME AND ADDRESS' NAME
  WRITE   1/5  FIRST-NAME        1/30 MIDDLE-I
          2/5  ADDRESS-LINE (1:1)
          3/5  CITY              3/30 ZIP /
END-READ
END
```

```
Page      1                                                97-08-19  17:55:47

  NAME AND ADDRESS
--------------------

RUBIN
    SYLVIA                   L
    2003 SARAZEN PLACE
    NEW YORK                 10036

WALLACE
    MARY                     P
    12248 LAUREL GLADE C
    NEW YORK                 10036

KELLOGG
    HENRIETTA                S
    1001 JEFF RYAN DR.
    NEWARK                   19711
```

DISPLAY VERT Statement

The standard display mode in Natural is horizontal.

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With the VERT clause option of the DISPLAY statement, you can override the standard display and produce a vertical field display.

The HORIZ clause option, which can be used in the same DISPLAY statement, re-activates the standard horizontal display mode.

Column headings in vertical mode are controlled with various forms of the AS clause:

- Without AS clause, no column headings will be output.
- AS CAPTIONED causes default headings to be displayed.
- AS *text* causes the specified *text* to be displayed as column heading. Note that a slash (/) within the *text* element in a DISPLAY statement causes a line advance.
- AS *text* CAPTIONED causes the specified *text* to be displayed as column heading, and the default column headings to be displayed immediately before the field value in each line that is output.

The following example programs illustrate the use of the DISPLAY VERT statement.

DISPLAY VERT without AS Clause

The following program has no AS clause, which means that no column headings are output.

```
** Example Program 'DISPLX09'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 FIRST-NAME
  2 CITY
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'NEW YORK'
  DISPLAY VERT NAME FIRST-NAME / CITY
  SKIP 2
END-READ
END
```

Note that all field values are displayed vertically underneath one another:

```
Page      1                                                  97-08-19  17:55:47

RUBIN
SYLVIA

NEW YORK


WALLACE
MARY

NEW YORK


KELLOGG
HENRIETTA

NEWARK
```

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DISPLAY VERT AS CAPTIONED and HORIZ

The following program contains a VERT and a HORIZ clause, which causes some column values to be output vertically and others horizontally; moreover AS CAPTIONED causes the default column headers to be displayed.

```
** Example Program 'DISPLX10'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 FIRST-NAME
  2 CITY
  2 JOB-TITLE
  2 SALARY (1:1)
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'NEW YORK'
  DISPLAY VERT AS CAPTIONED NAME FIRST-NAME
          HORIZ JOB-TITLE SALARY (1:1)
  SKIP 1
END-READ
END
```

```
Page      1                                                97-08-19  17:55:47

        NAME                  CURRENT             ANNUAL
     FIRST-NAME               POSITION            SALARY
-------------------- ------------------------- ----------

RUBIN                SECRETARY                      17000
SYLVIA

WALLACE              ANALYST                        38000
MARY

KELLOGG              DIRECTOR                       52000
HENRIETTA
```

DISPLAY VERT AS *text*

The following program contains an AS *text* clause, which displays the specified *text* as column header.

```
** Example Program 'DISPLX11'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 FIRST-NAME
  2 CITY
  2 JOB-TITLE
  2 SALARY (1:1)
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'NEW YORK'
  DISPLAY VERT AS 'EMPLOYEES' NAME FIRST-NAME
          HORIZ JOB-TITLE SALARY (1:1)
  SKIP 1
END-READ
END
```

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```
Page      1                                                  97-08-19  7:55:47

     EMPLOYEES               CURRENT            ANNUAL
                            POSITION            SALARY
-------------------- ------------------------ ----------

RUBIN                SECRETARY                     17000
SYLVIA

WALLACE              ANALYST                       38000
MARY

KELLOGG              DIRECTOR                      52000
HENRIETTA
```

DISPLAY VERT AS *text* CAPTIONED

The following program contains an AS *text* CAPTIONED clause.

```
** Example Program 'DISPLX12'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 NAME
  2 FIRST-NAME
  2 CITY
  2 JOB-TITLE
  2 SALARY (1:1)
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'NEW YORK'
  DISPLAY VERT AS 'EMPLOYEES' CAPTIONED NAME FIRST-NAME
          HORIZ JOB-TITLE SALARY (1:1)
  SKIP 1
END-READ
END
```

This clause causes the default column headers (NAME and FIRST-NAME) to be placed before the field values:

```
Page      1                                                  97-04-19  17:55:47

           EMPLOYEES                   CURRENT            ANNUAL
                                      POSITION            SALARY
------------------------------ ------------------------ ----------

NAME RUBIN                     SECRETARY                     17000
FIRST-NAME SYLVIA

NAME WALLACE                   ANALYST                       38000
FIRST-NAME MARY

NAME KELLOGG                   DIRECTOR                      52000
FIRST-NAME HENRIETTA
```

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Tab Notation P**field*

If you use a combination of DISPLAY VERT statement and subsequent WRITE statement, you can use the tab notation P**field-name* in the WRITE statement to align the position of a field to the column **and** line position of a particular field specified in the DISPLAY VERT statement.

In the following program, the fields SALARY and BONUS are displayed in the same column, SALARY in every first line, BONUS in every second line.
The text "***SALARY PLUS BONUS***" is aligned to SALARY, which means that it is displayed in the same column as SALARY and in the first line, whereas the text "(IN US DOLLARS)" is aligned to BONUS and therefore displayed in the same column as BONUS and in the second line.

```
** Example Program 'WRITEX07'
DEFINE DATA LOCAL
1 VIEWEMP VIEW OF EMPLOYEES
  2 CITY
  2 NAME
  2 JOB-TITLE
  2 SALARY (1:1)
  2 BONUS  (1:1,1:1)
END-DEFINE
READ (3) VIEWEMP BY CITY STARTING FROM 'LOS ANGELES'
  DISPLAY NAME JOB-TITLE VERT AS 'INCOME' SALARY (1) BONUS (1,1)
  WRITE P*SALARY '***SALARY PLUS BONUS***'
        P*BONUS  '(IN US DOLLARS)'
  SKIP 1
END-READ
END
```

```
Page      1                                                97-08-19 18:14:11

        NAME                 CURRENT            INCOME
                            POSITION
-------------------- ------------------------- ----------

POORE JR             SECRETARY                      25000
                                                        0
                                               ***SALARY PLUS BONUS***
                                               (IN US DOLLARS)

PREPARATA            MANAGER                        46000
                                                     9000
                                               ***SALARY PLUS BONUS***
                                               (IN US DOLLARS)

MARKUSH              TRAINEE                        22000
                                                        0
                                               ***SALARY PLUS BONUS***
                                               (IN US DOLLARS)
```

Further Example of DISPLAY VERT with WRITE Statement

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See the following example program in library SYSEXPG:

- WRITEX10

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